



Agriculture News

Yellowstone County Extension

March 2008

TO: Farm & Ranch Businesses
FROM: Yellowstone County Extension

Strip-Till Farming Workshop

On Wednesday, March 19, 2008, a Strip-Till Farming Workshop- will take place from 9:15 to 2:30 p.m. at the Bruce Markegard Farm. The Markegard Farm is located 4 miles west of Laurel, MT on Highway 10. Turn north on Markegard Road and go 1 mile to the site. Signs will be posted along the way.

9:15 ~ 9:30	Registration and Introductions
9:30 ~ 10:30	Strip-Till Research: Bill Iverson, Physical Scientist, USDA-ARS, Sidney, MT
10:30 ~ 10:50	Strip-Till Farming: Michael Peterson, Precision Till Agronomist, Orthman Agriculture
BREAK	Sponsored by Western Sugar Company
11:10 ~ 11:30	Strip-Till Farming: Dave Zimmer, Schlagel Manufacturing
11:30 ~ 12:00	Strip-Till Farmer Panel Q & A
LUNCH	Sponsored by Big Horn Conservation District
1:00 ~ 2:00	Field Demonstration of Strip-Till Equipment

The workshop is sponsored by the Natural Resources Conservation Service and Yellowstone & Big Horn Conservation Districts. For information contact Val Robertson @ 657-6135 ext. 115 or Jodi Hastings @ 665-3442 ext. 101.

Newer Spring Wheat Varieties Tested for Herbicide Sensitivity

By Ed Davis & Fabian Menalled MSU Cropland Weeds Research Associate & Extension Specialist

When the herbicide triallate, which is often sold as Far-GO, first entered the market 20 years ago, many crop varieties were tested for sensitivity to it. However, current grain producers have asked how newer varieties, particularly spring wheats, fare when planted with triallate.

To answer that question, we did two years of studies on spring wheat varieties at the Post Research Farm west of Bozeman, which tends to have somewhat higher rainfall than the rest of Montana. The tests were supported by a grant from Gowan, which makes Far-GO.

In general, most of the 18 varieties tested did not show significant yield decreases in the presence of triallate, especially when triallate was added via a hoe-style drill that keeps the triallate to the side of the seed.

Triallate is a preemergence selective grassy herbicide commonly used in wheat, barley, triticale, peas and lentils. Its residual activity controls wild oat and suppresses winter annual brome species for up to five months. Triallate is available as emulsifiable concentrates and granular formulations. Whether it should be incorporated into the soil before or after planting depends on the crop.

In 2006 and 2007, we evaluated spring wheat varieties for tolerance to triallate applied at either its recommended rate (one pound active ingredient per acre) or, to simulate an herbicide overlap, at twice the label rate (two pounds active ingredient per acre). We also included non-treated plots for comparison.

Triallate was applied in the early spring before planting. The soil was worked with a Triple K cultivator to a depth of 1.5 inches to incorporate the herbicide.

We tested 12 varieties in 2006 and 18 varieties in 2007. The varieties represented a wide range of grain and stem types (see Table at <http://www.montana.edu/cpa/news/hires.php?img=2026&ArtID=5683>). Each variety was seeded at 60 pounds per acre to a depth of two inches using either a hoe drill or a disc drill. The hoe openers create a furrow while displacing triallate-treated soil to the side, allowing the wheat seed to be planted in soil containing a lower concentration of herbicide. The disc drill maximizes crop response as it opens the soil, allowing the seed to drop and then be packed by wheels, forming a shallow furrow with little displacement of the triallate-treated soil, which accentuates crop response to the herbicide.

Spring wheat grain yields varied among varieties each year, and 2006 grain yields were greater than 2007 yields for all varieties.

As expected, response to triallate herbicide was most evident when seeded with a disc drill. We observed crop injury symptoms, including stand reduction, stunting and/or slight chlorosis within the first weeks following emergence. However, these early symptoms were associated with a reduction in grain yield in only a few varieties and when using a disc drill.

In 2006, varieties demonstrating a yield decrease when planted with a disc drill into triallate-treated soil (one pound active ingredient per acre) were Choteau, Conan, Explorer, McNeal and Scholar. However these same varieties did not show a yield drop when planted with a hoe drill.

In 2007, spring wheat varieties demonstrating a yield decrease when planted with a disc drill into triallate-treated soil (one pound active ingredient per acre) were Choteau, Ernest, McNeal, ONeal and Scholar, but this yield reduction was minimized or eliminated when a hoe drill was used.

More information on these trials, including yields and photos of the studied plots, see the Montana State University Cropland Weed Management web site (<http://www.ipm.montana.edu/CropWeeds/>).

Producers interested in using triallate in their fields should be aware that biotypes of wild oat resistant to triallate were identified in several small grain fields across Montana in 1990. Since then, resistant biotypes have expanded to more than 20,000 acres in Montana, and triallate-resistant wild oat plants have been reported in Idaho, California and Alberta, Canada. Currently in Montana, some wild oat biotypes show resistance to many herbicides, including triallate (Far-GO), difenzoquat (Avenge), imazamethabenz (Assert), diclofop (Hoelon), fenoxaprop (Puma), clodinafop (Discover), and pinoxaden (Axial).

Preventing and managing herbicide-resistant weeds requires an integrated approach. In addition to herbicides, producers should include all possible biological, cultural and mechanical weed control practices. Rotation of herbicides with different modes of action, planting different crops, scouting fields for resistant weeds, using herbicides with short soil residues and cleaning field equipment to prevent the spread of resistant biotypes are some of the practices that help us reduce the burden of herbicide-resistant biotypes.

Disclosure. Common chemical and trade names are used in this publication for clarity by the reader. Inclusion of a common chemical or trade name does not imply endorsement of that particular product or brand of herbicide and exclusion does not imply non-approval.

Contact: Fabian Menalled (406) 994-4783 or menalled@montana.edu

**For Fact Sheets and General Ag Information Specific to
Yellowstone County,**

Please refer to our web page at:

<http://www.co.yellowstone.mt.gov/extension/ag/>